In the Claims

The following Listing of Claims replaces all prior versions in the application:

1. (Previously presented) A method, comprising:

receiving information associated with an application;

determining a periodic control signal based on the information, the periodic control signal configured to drive an actuator having a rotatable mass such that the mass rotates to produce a vibration having a magnitude and a frequency, the magnitude of the vibration being based on a duty cycle of the control signal and independent of the frequency of the vibration; and

sending the periodic control signal to the actuator, wherein the control signal has at least one of an on time and an off time, the on-time of the control signal being associated with the magnitude of the vibration, the on-time of the control signal is determined based on a selected frequency of the vibration, if the selected frequency is below a predetermined threshold frequency, the on-time is determined using a first method, and if the selected frequency is above the predetermined threshold frequency, the on-time is determined using a second method.

2. (Cancelled)

3. (Previously presented) The method of claim 5, wherein the percentage is proportional to a desired magnitude of the vibration.

4. (Cancelled)

5. (Previously presented) The method of claim 1, wherein the on-time is determined as a percentage of a period of the vibration if the selected frequency is below the predetermined threshold frequency and the on-time is determined as a predetermined amount of time for each period of the vibration if the selected frequency is above the predetermined threshold frequency.

6. (Original) The method of claim 1, wherein the actuator is disposed within a gamepad controller, the application associated with a host microprocessor of a host computer, the vibration

is correlated with at least an event and an interaction occurring within a graphical environment of the application.

7. (Original) The method of claim 1, further comprising: monitoring a position of the mass about the axis of rotation so that the mass rotates in response to the control signal.

8. (Original) The method of claim 1, the information being associated with a kinesthetic effect, the method further comprising: mapping from the kinesthetic effect to a vibrotactile effect based on the information to produce the control signal.

9. (Original) The method of claim 1, the information being associated with a kinesthetic effect, the method further comprising: mapping from the kinesthetic effect to a vibrotactile effect based on the information to produce the control signal, the actuator being disposed within a haptic feedback device having a local microprocessor, the mapping being performed by the local microprocessor.

10. (Original) The method of claim 1, the information being associated with a kinesthetic effect, the method further comprising: mapping from the kinesthetic effect to a vibrotactile effect based on the information to produce the control signal, the actuator being disposed within a haptic feedback device having a local microprocessor, the mapping being performed by the local microprocessor, the gamepad controller including a joystick having two degrees of freedom and configured to provide input to the host computer when manipulated.

11. (Original) The method of claim 1, further comprising: sending an initial control signal to the actuator, the mass initiating rotation before initiation of the vibration.

12. (Original) The method of claim 1, wherein the actuator is one of a plurality of actuators disposed within a haptic feedback device, each actuator from the plurality of actuators is individually controllable to collectively produce the vibration.

13. (Original) The method of claim 1, wherein the control signal is modified by envelope parameters received from a host computer, the envelope parameters modifying the magnitude of the vibration.

14. (Original) The method of claim 1, wherein the information includes a high level command and at least one parameter, the actuator being disposed within a vibrotactile interface device having a local microprocessor separate from a host microprocessor, the local processor configured to parse the high level command.

15. (Original) The method of claim 1, wherein the information includes a high level command and at least one parameter, the high level command is a vibration command, the at least one parameter includes a magnitude parameter and a frequency parameter associated with the vibration.

Claims 16-32. (Cancelled)